RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

SF11 THRU SF16

GLASS PASSIVATED SUPER FAST RECTIFIER

VOLTAGE RANGE 50 to 400 Volts CURRENT 1.0 Ampere

FEATURES

* High reliability
* Low leakage
* Low forward voltage
* High current capability
* Super fast switching speed
* High surge capability
* Good for switching mode circuit

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: Device has UL flammability classification 94V-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 0.33 gram

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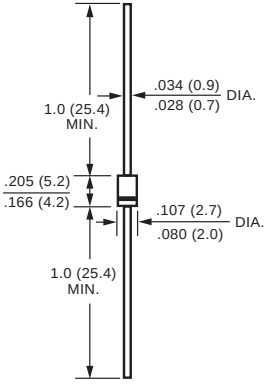

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MAXIMUM RATINGS (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	Volts
Maximum RMS Volts	V_{RMS}	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	Volts
Maximum Average Forward Current at T_A = 55°C	I_O	1.0						Amps
Peak Forward Surge Current I_{FM} (surge):8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30						Amps
Typical Junction Capacitance (Note 2)	C_J	15				10		pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 150						°C

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	UNITS
Maximum Forward Voltage at 1.0A DC		V_F	0.95				1.25		Volts
Maximum DC Reverse Current	@T_A = 25°C	I_R	5.0						uAmps
at Rated DC Blocking Voltage	@T_A =150°C		50						
Maximum Reverse Recovery Time (Note 1)		trr	35						nSec

NOTES : 1. Test Conditions: I_F=0.5A, I_R=-1.0A, I_{RR}=-0.25A.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

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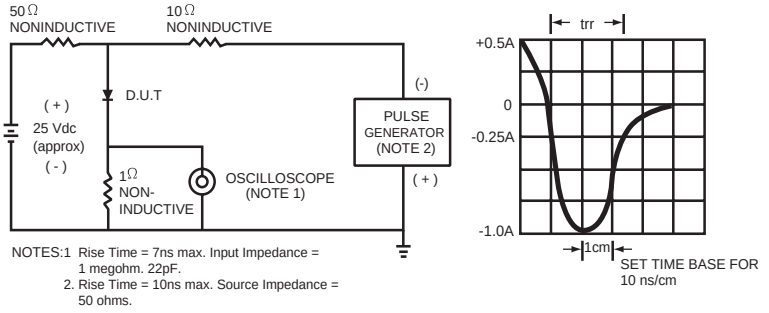
RATING AND CHARACTERISTIC CURVES (SF11 THRU SF16)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

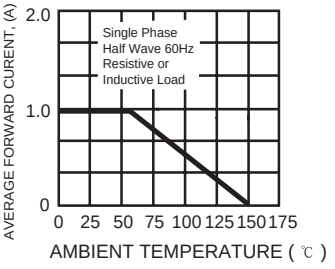


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

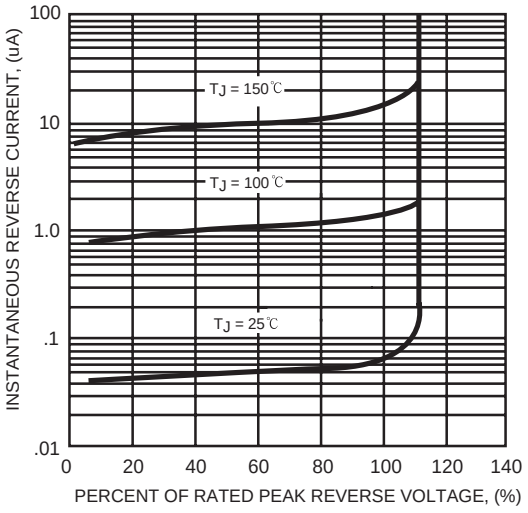


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

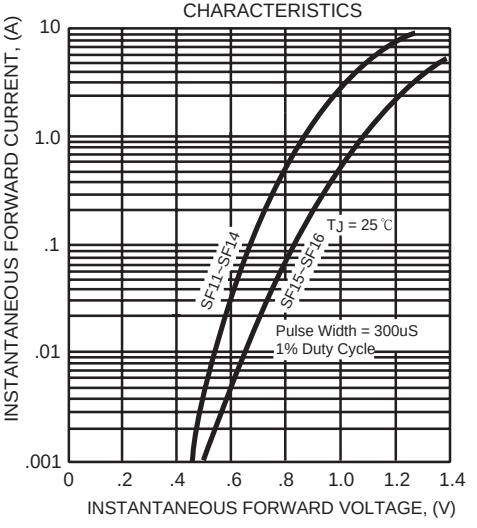


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

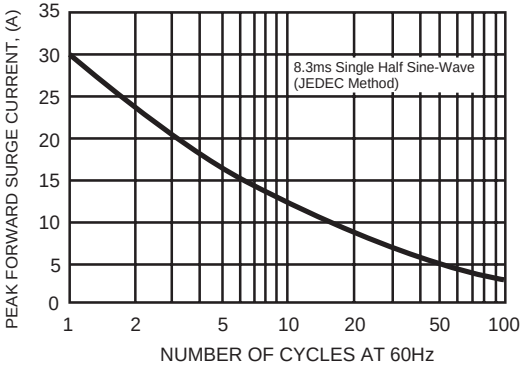


FIG. 6 - TYPICAL JUNCTION CAPACITANCE